

TORONTO STOCK EXCHANGE

JAN 3 1955

LISTING STATEMENT

DEER HORN MINES LIMITED

(No Personal Liability)

Incorporated under the Ontario Companies Act (Part XI) by Letters Patent dated December 7, 1950.

1. Address of the Company's Head Office and of any other offices:

Head Office: Room 1922, 44 King Street West, Toronto, Ontario.

Mine Office: Burns Lake, British Columbia.

2. Officers of the Company:

OFFICE HELD	NAME	ADDRESS	OCCUPATION
President	William Henry Bouck	R.R. No. 1, Downsview, Ontario	Barrister-at-Law
Vice-President	George Arthur Fallis	210 Glencairn Avenue, Toronto, Ontario	Barrister-at-Law
Secretary-Treasurer	Frederick Douglas Redfern	370 Walmer Road, Toronto, Ontario	Chartered Secretary

3. Directors of the Company:

NAME	ADDRESS	OCCUPATION
William Henry Bouck	R.R. No. 1, Downsview, Ontario	Barrister-at-Law
George Arthur Fallis	210 Glencairn Avenue, Toronto, Ontario	Barrister-at-Law
Clifford Victor Harrison	Burns Lake, British Columbia	Prospector
Franc. Renault Joubin	101 Donwoods Drive, Toronto, Ontario	Geologist
John Black Aird	112 Buckingham Avenue, Toronto, Ontario	Barrister-at-Law

4. Names and addresses of all transfer agents:

Chartered Trust Company, 34 King Street West, Toronto, Ontario.

5. Particulars of any fee charged upon transfer other than customary government taxes:

25 cents for the issue of each new certificate.

6. Names and addresses of all registrars:

Chartered Trust Company, 34 King Street West, Toronto, Ontario.

7. Amount of authorized capital: \$3,000,000.00.

8. Number of shares and par value: 3,000,000 shares. Par value \$1.00.

9. Full details of all shares issued in payment for properties or for any other assets other than cash:

DATE	NUMBER OF SHARES	DESCRIPTION
January, 1951.....	750,000	For the purchase of 26 surveyed mineral claims and 4 fractions of claims in the Province of British Columbia, of which 20 claims and 2 fractions are Crown-granted, the remaining claims are held through location rights, all in the Omineca Mining Division in the Province of British Columbia.
Total.....	750,000	

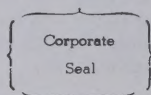
This listing statement is a copy of the listing application made by the applicant company. The Exchange has received no consideration in connection with the issue of this listing statement other than the customary listing fee. The papers and exhibits submitted by the applicant company in support of the listing application are open for inspection at the general office of the Exchange.

10. Full details of all shares sold for cash.	<table><tr><th>Date</th><th>No. of Shares</th><th>Price Per Share</th><th>Amount Realized by Company</th></tr><tr><td>January, 1951....</td><td>5</td><td>\$1.00</td><td>\$ 5.00</td></tr><tr><td>April, 1953.....</td><td>250,000</td><td>.10</td><td>25,000.00</td></tr><tr><td>April, 1953.....</td><td>200,000</td><td>.15</td><td>30,000.00</td></tr><tr><td>April, 1953.....</td><td>200,000</td><td>.25</td><td>50,000.00</td></tr><tr><td>July, 1953.....</td><td>60,000</td><td>.75</td><td>45,000.00</td></tr><tr><td>July, 1953.....</td><td>200,000</td><td>.30</td><td>60,000.00</td></tr><tr><td>December, 1953</td><td>25,000</td><td>.40</td><td>10,000.00</td></tr><tr><td>April, 1954.....</td><td>175,000</td><td>.40</td><td>70,000.00</td></tr><tr><td>July, 1954.....</td><td>200,000</td><td>.50</td><td>100,000.00</td></tr><tr><td>August, 1954.....</td><td>200,000</td><td>.50</td><td>100,000.00</td></tr><tr><td>Total.....</td><td>1,510,005</td><td></td><td>\$490,005.00</td></tr></table>	Date	No. of Shares	Price Per Share	Amount Realized by Company	January, 1951....	5	\$1.00	\$ 5.00	April, 1953.....	250,000	.10	25,000.00	April, 1953.....	200,000	.15	30,000.00	April, 1953.....	200,000	.25	50,000.00	July, 1953.....	60,000	.75	45,000.00	July, 1953.....	200,000	.30	60,000.00	December, 1953	25,000	.40	10,000.00	April, 1954.....	175,000	.40	70,000.00	July, 1954.....	200,000	.50	100,000.00	August, 1954.....	200,000	.50	100,000.00	Total.....	1,510,005		\$490,005.00
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Total.....	1,510,005		\$490,005.00																																														
11. Total number of shares issued.	2,260,005.																																																
12. Number of shares now in treasury or otherwise unissued.	739,995.																																																
13. Particulars of any issued shares held in trust for the Company or donated for treasury purposes.	None.																																																
14. Date of last annual meeting.	April 27, 1954.																																																
15. Date of last report to shareholders.	April 9, 1954.																																																
16. Details of any treasury shares (or shares issued subject to payment or shares held for the benefit of the treasury) now under option or the subject of any underwriting or sales agreement. If none, this to be stated.	By agreement dated April 15, 1954, E. H. Pooler & Co. Limited of Toronto underwrote 175,000 shares at 40 cents a share and secured options on 800,000 shares at prices of 50 cents and 60 cents a share. The underwritten shares and 400,000 optioned shares have been taken up, as set out in item 10 above, and the balance of the option remaining outstanding is as follows: 200,000 shares at 60 cents a share until February 17, 1955, 200,000 shares at 60 cents a share until May 17, 1955.																																																
17. Details of any shares pooled, deposited in escrow, non-transferable or held under any syndicate agreement or control.	675,000 shares, being 90% of the shares issued in payment for properties as set out in item 9, are held in escrow by Chartered Trust Company, subject to release, etc., only with the consent of the Ontario Securities Commission and the Board of Directors of the Company.																																																
18. Details of any registration with or approval or authority for sale granted by or any filing with a Securities Commission or corresponding Government body.	The Company has filed a prospectus with the Ontario Securities Commission dated April 21, 1954.																																																
19. Has any application for registration with, or approval or authority for sale by or any filing with a Securities Commission or corresponding Government body ever been refused, cancelled or revoked? If so, give particulars.	No.																																																

20. Particulars of any bonds, debentures, notes, mortgages, charges, liens or hypothecations outstanding.	None.
21. Enumerate fully, giving claim or property numbers, approximate acreage, townships and mining camp or oil field: (a) Properties owned where titles vested in Company. (b) Properties leased. (c) Properties otherwise held. Give particulars of title held by the Company in each instance, (e.g. patented, unpatented, Crown granted, held under mining license, perpetual lease, etc.)	<p>(a) Crown granted claims in the Omineca Mining Division, Province of British Columbia: Harrison Nos. 1 to 8 inclusive; Nos. 12 and 13; Nos. 21 to 27 inclusive; No. 29; Telluride Nos. 1, 2, 4, 5, 7 and 8, and Harrison Fractions Nos. 28 and 30; Telluride Fractions Nos. 3 and 6; Wedge Fraction and A. E. Fraction, consisting of approximately 1,118 acres.</p> <p>Unpatented claims in the Omineca Mining Division, Province of British Columbia: Round Nos. 1 to 4 inclusive, consisting of approximately 204 acres.</p> <p>Unpatented claims in the Kamloops Mining Division, Province of British Columbia: Lynn Nos. 1, 3, 5, 6 and 7; Stan Nos. 1 to 6 inclusive; Clark Nos. 1 to 8 inclusive; Yule Nos. 1 and 2; Cam Nos. 6, 7 and 8; Art Nos. 1 to 6 inclusive; and Lynn Fractions Nos. 2 and 4; Stan Fractions Nos. 1 and 2; Yule Fractions Nos. 3, 4 and 5, consisting of approximately 1,705 acres.</p> <p>(b) None.</p> <p>(c) None.</p>
22. Full particulars of any royalties or other charges payable upon production from each individual property.	None.
23. Are any lawsuits pending against the Company or any of its properties, or are there any other circumstances which might affect the Company's position or title adversely? If so, explain fully.	No.
24. Describe plant and equipment on property.	The Company owns general surface equipment together with a mining plant which was purchased from Emerald Glacier Mines Limited for the sum of \$45,000.00.
25. Describe development accomplished and planned.	A program of surveying, prospecting, surface exploration, diamond drilling and road building has been carried out. An adit has been driven for a length of 300 feet and plans are in progress for the drifting of a second adit. It is intended to develop the main vein and contact zone by adit and lateral work.
26. Date and author of mining engineer's or petroleum geologist's report filed with this application and available for inspection on request.	October 5th, 1954. H. R. Buckles, B.Sc.
27. Full particulars of production to date.	The Company has not commenced production.

28. Have any dividends been paid? If so, give dates, per share rate, and amount paid in dollars on each distribution.	None.
29. Name and address of the solicitor or attorney whose certificate that the applicant is a valid and subsisting company and that the shares which have been all- otted and issued were legally created and are fully paid and non-assessable has been filed with the Exchange.	Bouck, Hetherington & Fallis, 10 Adelaide Street East, Toronto, Ontario.
30. (a) Have any shares of the Company ever been listed on any other stock ex- change? If so, give par- ticulars.	No.
(b) Is any application for listing the shares of the Company on any other stock exchange now pending or contem- plated? If so, give par- ticulars.	No.
(c) Has the listing of any shares of the Company ever been refused or deferred on any stock exchange? If so, give particulars.	No.
31. Particulars of the principal busi- ness in which each director has been engaged during the past five years, giving the length of time, position held and name of employing company or firm.	<p>WILLIAM HENRY BOUCK is a solicitor and is a member of the firm of Bouck, Hetherington & Fallis, Barristers and Solicitors, 10 Adelaide Street East, Toronto, Ontario.</p> <p>GEORGE ARTHUR FALLIS is a solicitor and is a member of the firm of Bouck, Hetherington & Fallis, Barristers and Solicitors, 10 Adelaide Street East, Toronto, Ontario.</p> <p>CLIFFORD VICTOR HARRISON is a prospector and is self-employed.</p> <p>FRANC RENAULT JOUBIN is a mining geologist and has been Managing Director of Technical Mine Consultants Limited since March 15th, 1952. Prior to that time he was self-employed.</p> <p>JOHN BLACK AIRD is a solicitor and has been a partner in the firm of Edison, Aird & Berlis, Barristers and Solicitors, 111 Richmond Street West, Toronto, Ontario, since January 1, 1953. Prior to that time he was associated for more than three years with the firm of Wilton & Edison, 80 Richmond Street West, Toronto, Ontario.</p>

Dated at Toronto, Ontario, the 25th day of October, 1954.



DEER HORN MINES LIMITED

"W. H. BOUCK", *President.*

"F. D. REDFERN", *Secretary-Treasurer.*

STATEMENT SHOWING NUMBER OF SHAREHOLDERS as of October 12, 1954

Number	Shares
6 Holders of 1 - 100 shares.....	303
154 " " 101 - 1000 ".....	83,900
7 " " 1001 - 2000 ".....	14,000
7 " " 2001 - 3000 ".....	21,000
1 " " 3001 - 4000 ".....	3,300
1 " " 4001 - 5000 ".....	4,500
13 " " 5001 - up ".....	2,133,002
189 Stockholders	Total shares..... 2,260,005

FINANCIAL STATEMENTS

BALANCE SHEET AS AT AUGUST 31st, 1954

ASSETS

Cash in Bank (Toronto).....	\$198,627.32	
Cash in Bank (Kamloops, B.C.).....	9,845.18	
		\$ 208,472.50
Accounts Receivable (Toronto).....	\$ 348.19	
Accounts Receivable (Field).....	1,144.73	
Prepaid Workmen's Compensation Insurance.....	647.50	
		2,140.42
PROPERTIES (at cost):		
26 claims (Crown granted); 4 Fractions (Crown granted); 4 claims (not Crown granted), Omineca Mining Division, B.C.; 30 claims (unpatented); 7 Fractions (unpatented), Kamloops Mining Division, B.C.....	\$752,843.79	
BUILDINGS (at cost).....	10,870.87	
MACHINERY AND EQUIPMENT (at cost).....	76,524.78	
OFFICE FURNITURE AND FIXTURES (at cost).....	1,690.00	
		841,929.44
MATERIALS AND SUPPLIES.....		7,214.01
DEVELOPMENT, EXPLORATION AND ADMINISTRATION EXPENSES.....		178,759.37
ORGANIZATION EXPENSE.....		3,744.54
		<u>\$1,242,260.28</u>

LIABILITIES AND CAPITAL

Accounts Payable.....	\$ 612.99	
Workmen's Compensation Accrual.....	597.80	
Unemployment Insurance Accrual.....	41.94	
Income Tax Accrual.....	1,002.55	
		\$ 2,255.28
CAPITAL:		
Authorized—3,000,000 shares, par value \$1.00 per share.		
Issued— 750,000 shares for Property.....	\$750,000.00	
1,510,005 shares for Cash.....	\$1,510,005.00	
Deduct: Discount on shares.....	1,020,000.00	
	490,005.00	
		1,240,005.00
		<u>\$1,242,260.28</u>

Approved: "W. H. BOUCK", *Director*.

"FRANC. RENAULT JOUBIN", *Director*.

CERTIFICATE

The books and records of Deer Horn Mines Limited have been examined by me for the period ended August 31st, 1954, and I have received all the information and the explanations required.

The above Balance Sheet is properly drawn up so as to present fairly the financial position of the Company as at August 31st, 1954, according to the best of my information and the explanations given me and as shown by the books of the Company.

"E. F. GRIFFITH",

Accountant.

Toronto, Ontario, October 7th, 1954.

From Inception of Company to August 31st, 1954

Diamond Drilling.....	\$ 17,995.77
Surface Exploration and Prospecting.....	61,297.77
Road Construction.....	13,939.70
Mill Testing.....	600.00

FIELD ADMINISTRATION:

Salaries.....	\$10,456.15
Insurance.....	4,567.25
Mine Management.....	2,180.20
Travel and Transportation.....	2,171.19
Telephone and Telegraph.....	1,738.97
Assaying.....	1,630.00
Office Expenses.....	1,521.53
Provincial Sales Taxes.....	1,350.00
Service Truck.....	967.24
Radio Communication.....	943.44
Cookery Expenses.....	793.63
Office and Storage Rentals.....	682.72
Warehouse Operating Expenses.....	538.25
Mapping and Engineering.....	358.80
Unemployment Insurance.....	175.92
Vacation Pay.....	105.49
Bank Charges.....	98.17
Taxes and Licenses.....	561.52
Road Expenses.....	81.61
Buildings Maintenance.....	119.50
Base Camp Expenses.....	205.00
First Aid.....	19.34
Workmen's Compensation.....	427.01
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	31,692.93

GENERAL AND ADMINISTRATION:

Head Office.....	\$ 4,386.88
Management and Engineering Fees.....	3,756.25
Advertising.....	2,420.17
Travel and Transportation.....	2,265.81
Telephone and Telegraph.....	1,512.81
Legal and Audit.....	324.36
Postage.....	220.62
Bad Debts.....	189.60
Taxes and Licenses.....	138.60
Printing and Stationery.....	93.19
Bank Charges.....	41.07
Employees' Insurance.....	40.61
Donations.....	15.00

DEVELOPMENT EXPENSES PERFORMED BY PREVIOUS OPERATOR.....	35,000.00
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LOSS ON SALE OF EQUIPMENT.....	2,828.23
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\$178,759.37

ENGINEER'S REPORTS

REPORT ON PROPERTY, OMINECA MINING DIVISION, BRITISH COLUMBIA

Property.—The property consists of 34 claims and fractional claims, as follows:

Claim No.	Lot No.		Claim No.	Lot No.	
Harrison No. 1	3002	Crown-granted	Wedge Fraction	3007	Crown-granted
" No. 2	3004	"	A. E. Fraction	3011	"
" No. 3	2999	"			
" No. 4	3003	"			
" No. 5	3005	"			
" No. 6	3013	"	Claim No.	Lot No.	
" No. 7	2997	"	Telluride No. 1	3014	
" No. 8	2998	"	" No. 2	3012	
" No. 12	3006	"	" No. 3 Fr.	3015	
" No. 13	3010	"	" No. 4	3016	
" No. 21	3020	"	" No. 5	3017	
" No. 22	3021	"	" No. 6 Fr.	3018	
" No. 23	3009	"	" No. 7	3000	
" No. 24	3008	"	" No. 8	3001	
" No. 25	3019	"			
" No. 26	3025	"	Claim No.		
" No. 27	3024	"	Round No. 1	Recorded during 1953	
" No. 28 Fr.	3022	"	Round No. 2	" " "	
" No. 29	3026	"	Round No. 3	" " "	
" No. 30 Fr.	3023	"	Round No. 4	" " "	

Title.—The property is owned outright and is held in the name of Deer Horn Mines Limited, at 1922 44 King Street West, Toronto, Ontario.

Location.—The claim group is situated 85 miles west-southwest of Burns Lake, which is on the Canadian National Railroad, approximately half way between Jasper and Prince Rupert. More exactly, the property lies 2½ miles southwest of the southwest tip of Whitesail Lake. It is within the Hydro-Power Reserve area of the well-known Kitimat project.

Access.—At the present time, access is arduous. Wistaria, on Ootsa Lake, is reached by road from Burns Lake, a distance of 56 miles. From this point the southwestern tip of Whitesail Lake is reached by boat. A road leads from here six miles to the mineralized zone on the Company's property.

Alternatively, planes may be chartered at Burns Lake to proceed directly to a lake adjacent to the property (Lindquist Lake).

When the flooding to be brought about by the Kitimat operation has been completed, however, this mode of travel will be vastly improved by the birth of a navigable lake connecting the Deer Horn property to the highway. It is probable that at this time, and with proper organization, the cost-per-ton-of-freight-moved, from the railroad at Burns Lake to the property, will be in the neighbourhood of \$10 per ton, and possibly less.

Communication.—By means of radio, the mine office can contact Burns Lake or even Vancouver.

Topography.—The area is mountainous. The showings are above timber line, which is at approximately 3,700 feet. At this elevation the snowfall is very heavy, and consequently the summer season is shortened. The elevation of Lindquist Lake, at the south property boundary, is 2,900 feet above sea level, while the highest part of the main tungsten zone is 5,700 feet above sea level.

Timber.—Between 3,000 and 3,500 feet above sea level there is good timber to meet mine requirements at Lindquist Lake on the Company's property.

History of the Property.—The property was staked originally in 1943 following the finding of a tungsten occurrence. In 1944 gold and silver were discovered and additional claims were staked. In July, 1950, the property was acquired by Deer Horn Mines Limited.

Work Performed to Date.—Surface trenching and 13,000 feet of diamond drilling were performed during the summers of 1944-45-46. This was directed towards the gold-silver occurrence. No work of importance was undertaken to develop the tungsten deposit.

During the summer of 1952, J. S. Ross performed work to assess the value of the property. This consisted of surveying, mapping, re-logging of drill core, and of sampling both the gold-silver and the tungsten deposits.

In 1953 a further 865 feet of diamond drilling was performed.

In 1954 No. 1 Adit entry, to explore the gold-silver occurrence, was started and a road from here to both Whitesail Lake and to Lindquist Lake was completed. This adit is currently being driven, and is expected to contact the ore-zone at a distance of 300 feet from the portal on the 4,260 foot horizon.

GEOLOGY

General.—Map 820(A) of the Geological Survey of Canada shows the property to be located in or about the general area of the eastern contact of the Coast Range Batholith with Tertiary Volcanics and Jurassic Sediments. In this locality the trend of the contact is approximately north 35 degrees west. The observation may be made that in many instances mines and important mineral occurrences have been found along this contact for hundreds of miles.

Notwithstanding the foregoing, J. S. Ross reports "as far as is known, the only rocks in contact with the batholith are those of the Hazelton group, Jurassic in age." This group consists of volcanic rocks overlain by conformable sediments, and it is inferred that the intruding batholith is Upper Jurassic or Lower Cretaceous in age.

Local Geology.—The property lies on the eastern side of an embayment in the batholithic contact. Locally, the contact is striking easterly in the vicinity of the property.

The batholith includes rocks termed granodiorite and quartz-diorite, the latter being most common near the contact. Further west (or south) from the contact granodiorite predominates.

Contacting the batholith, and to the north and to the east, the Hazelton group consists of slate, tuff, argillite, limestone and volcanic breccia. The formations strike parallel to the contact, and dip 35 to 80 degrees to the south.

Hydrothermal alteration is common near the contact.

Structural Geology.—East of the mineral deposits a major fault strikes southeast, and a horizontal displacement of 900 feet is reported.

Many minor post-vein cross-faults offset the gold-bearing veins for short distances. These faults strike from north 25 degrees west to north 20 degrees east.

ORE DEPOSITS

General Statement.—The Company's property shows two types of mineralization, as follows: tungsten and gold-silver deposits. All of the occurrences are in a general way considered as being related to the contact of the Coast Range batholith with older rocks.

The tungsten deposits, on which so far only preliminary bulk sampling has been carried out, suggest economic tonnages and grades of this ore. The occurrences are on claims Harrison 1, 2, 5 and 6.

The gold-silver deposits lie on claims Harrison 5, 12 and 13. These are currently of most interest and on these have been performed the bulk of the work accomplished to date.

Tungsten Deposits.—The area of the tungsten occurrences lies 650 feet west of the extreme west end of the contact vein, as it is now recognized.

The main tungsten zone consists of several outcrops of tuffaceous argillite. These project from a large talus slide having dimensions 173 feet by 1,590 feet up the slope. The slide extends from an elevation 4,700 feet to 5,738 feet above sea level and the talus material is tungsten-bearing.

The tungsten mineral is scheelite and occurs in faintly banded, fine-grained green tuffaceous argillite. On the outcrops the formation strike is north 48 degrees west. The bedding dips to the southwest at 45 and 65 degrees. The area is a few hundred feet from the contact of the Coast Range batholith.

The mineralization occurs in fractures and veinlets parallel and perpendicular to the formation. The latter type dips to the north.

A second zone, apparently of less importance, has dimensions 240 feet in length and is 150 feet across. A talus zone 230 feet by 550 feet wide is associated with this occurrence. Quartz in fractures and in veins carries scheelite. One of these veins is 50 feet in length and is 2½ feet in width.

Sampling of Talus Slide—Main Tungsten Zone.—Sampling was carried out here by J. S. Ross in 1952 with the aid of a mineral lamp. The area of the slide was divided into blocks and 48 samples were taken.

Tonnage Indicated in Talus Slide.—Calculations from data acquired as outlined above indicates that for a depth of one foot of talus, 21,100 tons of scheelite bearing rock is represented. The depth of the slide averages a little over one foot. Since the ore grade of the slide averages 0.35% WO₃ (from muck samples) it is apparent that a WO₃ content of over 700 tons is present or 1,400,000 pounds.

The price of tungsten is subject to fluctuation and has dropped since the date of sampling (1952). The deposit, nevertheless, has value and methods of treatment and marketing should be investigated. The current price for tungsten is approximately \$26.88 to \$27.70 per long ton unit (22.4 lbs. of contained WO₃), CIF European ports.

Gold-Silver Deposits.—The two occurrences recognized as most important are situated the one close to the other. They are known as the "Contact Vein" and the "Main Vein".

Surface Outcrops.—These two veins are both more or less talus-covered. The former outcrops in one place only, where a speculative trench was dug down to bedrock. The latter vein, or Main Vein, has been trenched at intervals for a distance of 2,075 feet. Of this distance some 850 feet remains unexplored. The vein is known to extend for a further 500 feet, bringing its probable total length to 2,580 feet.

The topography of the occurrences is rugged. Both lie on the southerly-facing slope of a mountainside, having a grade of 1 in 2. The face of the slope is cut by minor depressions.

The veins sub-parallel each other in strike, and cut obliquely along the mountainside in an easterly direction.

It has been stated that the two veins are separated from each other by a horizontal distance of 530 feet. This figure is very rough since they dip towards each other and this makes the distance of separation very variable.

Contact Vein.—This occurrence lies within a zone having an over-all width of some 150 feet. As inferred from the name of the zone, it lies near the contact of the Coast Range batholithic rocks with the older intruded sediments. The zone strikes to the east and dips to the south at approximately 60 degrees. It is sub-parallel and close (530 feet or less) to the "Main Vein".

The zone is composed of rocks classed mainly as quartz-sericite schist, formed as a product of metamorphism.

Within this zone are bands of silicified rocks. These are dike-like and commonly called "aplite". At the contacts of the "aplite" with the sericite schist occurs a system of gold-silver veins and stringer zones, called the "Contact Vein". Vein-mineralization consists of pyrite, magnetite, sphalerite, chalcopyrite, galena, pyrrhotite and gold-silver tellurides.

The gold-silver "Contact Vein" has been traced for a strike length of 950 feet. Within this distance three ore zones, having an aggregate length of 725 feet, have been outlined by 9 diamond drill holes.

Main Vein.—The occurrence is in diorite, and the vein strikes in an easterly direction. Its dip is quite variable, ranging from 20 degrees to 45 degrees to the north.

The vein structure consists of a well defined white quartz vein from 3 to 20 feet in width, with an average of 9 feet. Mineralization is similar to that of the "Contact Vein" (some 500 feet or so to the north and sub-parallel). It consists of heavy pyrite, some magnetite, sphalerite, chalcopyrite, galena, pyrrhotite and gold-silver tellurides.

In several places the vein is offset by minor faulting with displacements generally less than 100 feet.

The main vein has been trenched at intervals for a distance of 2,075 feet. Its full length has yet to be determined.

Diamond drilling within the vein length mentioned covers a strike distance of 1,550 feet.

RELATIONSHIP BETWEEN CONTACT AND MAIN VEIN

The Main Vein structure dips into the Contact Vein and it is probable that a junction at a depth of 200 feet will take place.

A possibility exists that the Main Vein is one of a system of veins parallel to this and forking off from the Contact Vein. On the other hand, the Main Vein rolls over and reverses its dip to follow down the Contact Vein.

Some of the drill holes show values at core depths suggestive of the possibilities of either of the foregoing surmises.

DEVELOPMENT RESULTS AND ORE INDICATED

The drilling undertaken has supported surface indications of the existence of ore zones at the Contact and Main Vein occurrences. In the consideration of figures to be entertained as an indication of prospective tonnage so far outlined, it is emphasized that such estimates are open to wide margins of error.

The diamond drilling of the occurrence has not been pursued as far as might have been the case, had conditions been suitable. These conditions have led the management to abandon diamond drilling and to continue exploration and development of the ore-body by means of an adit entry, which is now being driven.

For this reason calculations must be tempered with some degree of surmise in order to ascertain the probable target already in sight.

Main Vein.—Following a study of maps and reports, it is the writer's opinion that the following grade and tonnage may be used as a preliminary to such results as may be obtained from the current underground work. Six zones are represented.

Ore Length.....	1,075 ft.	Indicated by surface sampling.
Ore Width.....	10.35 ft.	Average of surface samples and drill hole samples.
Slope Depth.....	190 ft.	Average backs above drill holes.
Tonnage.....	176,320 tons	
Grade Gold.....	.269	Weighted average of surface and drill holes.
Grade Silver.....	7.32	Weighted average of surface and drill holes.
Gross average dollar grade.....		\$15.27
(Au @ \$35.00 oz. Ag. @ 80c oz.)		

Contact Vein.—Drill intersections in the "Contact Vein" structure have been made at horizons between Elevation 4125 and Elevation 4560. This represents a vertical range of 435 feet. For purposes of suggesting a tonnage figure, a vertical range of 150 feet is taken and the figure is believed conservative. The figures for widths and grade are taken from those supplied by J. S. Ross, P.Eng., following work he did on the property. In the ore zone the vein is totally overburden covered on the outcrop. The following is therefore derived totally from diamond drill intersections and represents three separate zones.

Ore Length.....	725 feet
Ore Width.....	8.7 feet
Slope Depth.....	150 feet
Tonnage.....	78,844 tons
Grade Gold.....	.407 oz./ton
Grade Silver.....	12.24 oz./ton
Gross average dollar grade.....	\$24.03

Summary

Section	Tonnage	Grade	Value
Main Vein.....	176,320	\$15.27	\$2,692,424
Contact Vein.....	78,844	24.03	1,894,621
Total.....	255,164	\$17.97	\$4,587,045

METALLURGY

Some investigations have already been made to ascertain the amenability of the gold-silver-telluride ore to extraction. Ninety-five per cent of the gold and eighty-four per cent of the silver is shown recoverable by these early tests, grinding the ore to 25.2% minus 100 mesh. The relatively coarse grind suggests that mill operation may be economical; this economy may be offset by a fairly high reagent consumption.

The Company has been offered a mill which in the past has handled 250 maximum per day. The cost of this, "where is," is \$100,000.

The time has not arrived for the decision to make this purchase, but it is mentioned as a cost figure. Further work may find the mill insufficient for the needs of the property, or it may suggest that mill installation is not at all warranted.

ECONOMICS OF OPERATION

No accurate forecast as to the cost of mining in a remote area can be made.

It can be shown that since the inward freight has a defined relationship to the tonnage being milled, excessive freight charges add only a small amount to the operating cost.

Thus, if freight charges are as much as \$80 per ton in excess of the freight charges at other operating mines, for 200 tons per day production and 400 tons of imports per year, the additional charge is less than fifty cents per ton.

In practice, there are other factors which make the cost of remote operation somewhat more costly than at an equivalent operation in a settled area. Among these are labour, wages, warehousing, insurance, staff, and so on.

The transportation cost at the property will be high, but certainly not as high as the figure shown above, which was taken merely to indicate a principle.

Total costs of seven British Columbia mines show an average of \$12.90 per ton (all inclusive deferred charges, depreciation, provision for taxation, etc.). Two are higher at each approximately \$17.00 per ton (overall); two are high cost silver-lead-zinc producers, showing a cost of \$32.00 per ton (overall).

Suggested as a possible cost break-down are the figures tabulated:

Exploration and Development.....	\$ 1.00
Mining.....	8.00
Milling.....	2.75
General.....	1.50
Total Operating.....	\$13.25
Write-off.....	1.50
Total.....	\$14.75

With a grade of \$17.97, \$3.12 per ton would remain as a net profit.

There is every reason to believe that the operation could be a successful one.

CONCLUSIONS

1. The property is located in an area which in time will be readily accessible.
2. Diamond drilling and surface trenching already have indicated substantial tonnages of commercial and marginal gold-silver ore.
3. The ore zones are associated with the great Coast Range Batholith contact, a location at which many other producers of precious metals are situate.
4. The zones so far investigated represent no more than 50% of the known favourable ore structure.
5. There are indications that the current underground work will greatly increase the tonnage and improve the ore grade, bringing much of the ore classed as marginal into the category of pay-ore.
6. The mountainside location of the occurrence makes it suitable for low-cost adit development.
7. The property is one where the work so far completed has met with success, and where the chances of blocking out a large gold-silver ore body are excellent.

Toronto, Ontario, November 20, 1954.

"J. R. MACDONALD", B.Sc.,
Professional Engineer.

A REPORT ON THE PROPERTY, KAMLOOPS MINING DIVISION, BRITISH COLUMBIA

Property and Title.—The Company holds a total of 42 full and fractional claims in Kamloops Mining Division. These claims are numbered as follows:

Claim Name	Tag No.	Claim Name	Tag No.	Claim Name	Tag No.
Rose No. 1 Fr.	B34784	Yule No. 1	B34722	Stan No. 1	B2560
" No. 2 Fr.	B34785	" No. 2	B34723	" No. 2	B2561
Sanco No. 1 Fr.	B34786	" No. 3 Fr.	B34724	" No. 3	B2562
Art No. 1	B34741	" No. 4 Fr.	B34725	" No. 4	B2563
" No. 2	B34737	" No. 5 Fr.	B34726	" No. 5	B2564
" No. 3	B34736	Cam No. 6	B34738	" No. 6	B2565
" No. 4	B34735	" No. 7	B34739	Stan No. 1 Fr.	A88858
" No. 5	B34734	" No. 8	B34740	" No. 2 Fr.	A88859
" No. 6	B34733	Clark No. 1	B19874	Gord No. 15	B33315
" No. 7	B34732	" No. 2	B19879	" No. 16	B33316
" No. 8	B34719	" No. 3	A88860	" No. 17	B33317
" No. 9	B34720	" No. 4	A88861	" No. 18 Fr.	B33318
" No. 10 Fr.	B34721	" No. 6	A88881	" No. 19	B34729
		" No. 8	A88883	" No. 20 Fr.	B34731
				" No. 22 Fr.	B34718

Location and Accessibility.—The 42 claims adjoin the property of Rexspar Uranium & Metals Mining Co. Ltd. and are located approximately two and a half miles south of the Settlement of Birch Island.

The C.N.R. line and an excellent year-round highway pass through Birch Island, which is 80 miles northeast of the city of Kamloops.

Topography and Physical Features.—The topography of the area is rugged but presents no problems. Any required roads for access to various points on the property can be built economically.

Water.—There is an adequate supply of water for mine development and domestic needs on the property. A source of water large enough for any future concentrator is available from the North Thompson River at Birch Island.

Power.—Though no Hydro Electric power is available, plans are reportedly prepared for the development of Hydro power at the Clearwater River project of the B.C. Hydro Commission.

Timber.—A plentiful supply of timber is present on the property for mine or fuel purposes.

General Geology.—Except for a creek bed in which rock is exposed and where the first discovery was made, fairly heavy overburden is prevalent on the claim group.

The property is underlain by metamorphosed sediments of Pre-Cambrian age cut by later granodiorite intrusives. The discovery of radioactivity occurs under similar conditions as the uranium occurrence on the adjoining property of Rexspar Uranium & Metals Mining Co. Ltd. in pyritized brecciated trachyte.

Radioactive Showings.—The radioactivity is present in a pyritized, brecciated trachyte zone quite similar to the ore zones on the adjoining property of Rexspar Uranium & Metals Mining Co. Ltd. This zone is located on Claim Clark No. 3 in the bed of a creek which had cut away the surrounding overburden. The trachytes are well sheared and it is in the sheared zones that mineralization occurs. To date, surface exploration and a limited amount of diamond drilling has been successful in tracing this zone for over 2,000 feet.

Recommendations and Conclusions.—Underground exploration is now under way on the adjoining Rexspar property and is meeting with favourable results. The fact that the limited exploration completed to date on the Company's claim group has traced a zone of similar mineralization for over 2,000 feet, and in a comparable geological setting, warrants the extensive diamond drilling program now under way to explore the discovery.

"J. R. MACDONALD", B.Sc.,

Professional Engineer.

Toronto, Ontario, November 20, 1954.

CERTIFICATE

I, J. R. Macdonald, of the City of Toronto, in the Province of Ontario, hereby certify:

- That I am a Mining Engineer, with a business address at Suite 55, 18 Toronto Street, Toronto, Ontario.
- That I am a graduate of Queen's University and that I have been practising my profession continuously since 1936, but exclusive of the period of the war.
- That I have held the following responsible positions:
 - 1936-38—Underground Supervisor, Central Patricia Gold Mines No. 1.
 - 1938-40—Mine Manager, Central Patricia Gold Mines No. 2.
 - 1940 —Underground Supervisor, Stadac ona Rouyn Mines.
 - 1940 —Underground Supervisor, Jerome Gold Mines.
 - 1945-46—Exploration Manager, Alexander Red Lake Mines.
 - 1946-48—Mine Manager, Diversified Mining Interests Ltd.
 - 1948-49—Exploration Manager, Macho River Gold Mines.
 - 1949-50—Exploration Manager, Roybar Uranium & Gold Mines.
 - 1950-53—Resident General Manager for Technical Mine Consultants Ltd. at Beaverlodge, Saskatchewan.
 - 1954 —Consulting Practice. Associated, amongst others, with Lorado Uranium Mines Limited, and made recommendations resulting in shaft development and successful underground program.
- That I have no direct or indirect interest whatsoever, nor do I expect to receive any in the properties of Deer Horn Mines Limited, or in the securities thereof.
- That the accompanying report on the property at Burns Lake is based on the reports, maps and correspondence by J. S. Ross, M.Sc.; R. Macrae, B.Sc.; L. Labow, B.Sc. and that the report on the property at Birch Island is based on a study and personal examination of the property of Rexspar Uranium & Metals Mining Co. Ltd., which is adjacent, and on information supplied by H. Buckles, B.Sc.

"J. R. MACDONALD", B.Sc., Professional Engineer.

(Registered in the Provinces of Ontario and Saskatchewan)

Dated at Toronto, November 20, 1954.

